



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/800,484

03/15/2004

David Corven

P706785US1

9300

24938

7590

11/02/2005

DAIMLERCHRYSLER INTELLECTUAL CAPITAL CORPORATION

CIMS 483-02-19

800 CHRYSLER DR EAST

AUBURN HILLS, MI 48326-2757

EXAMINER

KO, TONY

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,484

Applicant(s)

CORVEN ET AL

Examiner

Tony Ko

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

This office action is in response to amendment filed on 8/25/05.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Christensen (U.S. Patent Number 4,745,293).

3. Regarding claims 1 and 7, Christensen discloses (Figs. 1 and 9) an optical sensor for detecting a level of a liquid in a reservoir, said optical sensor comprising: a display (28); light pipe bundle (18b having waveguide 17) optically connected to said display and extending to a level of interest in said reservoir, where said light pipe is formed from a material having a refractive index higher than air's refractive index and less than or equal to said liquid's refractive index (Col. 5, Lines 49-51); and a light optically connected to said light pipe.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen in view of Bryant (U.S. Patent 5,578,995).

6. Regarding claims 2 and 8, Christensen discloses the invention set forth above. Christensen does not disclose the pipe is formed with plastic tube. Bryant discloses (fig. 6) the use of a plastic tube (17). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use plastic tube to form the pipe to obtain a more lightweight device.

7. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen.

8. Regarding claims 3 and 9, Christensen discloses the invention set forth above. Christensen does not disclose said light pipe is an optical fiber. It is well known to use optical fiber as a light pipe. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use optical fiber as light pipe to increase the flexibility of light pipe.

9. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen in view of Cohn (U.S. Patent 5,422,495).

10. Regarding claims 4 and 10, Christensen discloses the invention set forth above. Christensen does not disclose to form the pipe with a glass rod. Cohn discloses the use of glass rod to form a pipe (Claim 29). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use form the pipe with glass rod to obtain more accurate detection.

11. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen in view of Weiss (U.S. Patent 6,172,377).

12. Regarding claims 5 and 11, Christensen discloses the invention set forth above. Christensen does not disclose the light pipe is a plastic rod. Weiss discloses the use of plastic rod (Col. 2, Line 60). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use plastic rod as a light guiding pipe to obtain a more lightweight device.

13. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen in view of Clare (U.S. Patent 6,396,583).

14. Regarding claims 6 and 12, Christensen discloses the invention set forth above. Christensen does not disclose the use of light emitting diode. Clare discloses (Claim 6) the use of light emitting diode. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use light emitting diode to provide an efficient and compact light source.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen in view of Vasel (U.S. Patent 3,120,125).

16. Regarding claim 13, Christensen discloses the invention set forth above. Christensen does not disclose each optical fiber in the bundle extends to a different level of interest in said reservoir. Vasel teaches each optical fiber in the bundle extends to a different level of interest in said reservoir. It would have been obvious to a person of ordinary skill in the art at the time of the invention to have each optical fiber in the

bundle extends to a different level of interest in said reservoir to detect the water level at a various position of the light pipe to ensure the accuracy.

17. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen in view of Vasel further in view of Clare.

18. Christensen in view of Vasel discloses the invention set forth above. Christensen in view of Vasel does not disclose the use of light emitting diode. Clare discloses (Claim 6) the use of light emitting diode. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use light emitting diode to provide an efficient and compact light source..

Response to Arguments

19. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926. The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TKO



TIMOTHY X. LUU
PATENT EXAMINER